DOCUMENT RESUME

ED 185 893 HE 012 517

AUTHOR Boyles, Marcia
TITLE Academia's Garbage: Campus/Community Solid Waste Projects.
INSTITUTION American Association of State Colleges and Universities, Washington, D.C.
SPONS AGENCY Environmental Protection Agency, Washington, D.C. Office of Federal Activities.
PUB DATE Jun 78
GRANT T900566-01-3
NOTE 25p.; Best copy available.
AVAILABLE FROM American Association of State Colleges and Universities, One Dupont Circle, Suite 700, Washington, DC 20036

EDRS PRICE MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS *Community Action; Community Education; Energy Conservation; *Environmental Education; *Environmental Standards; Federal Aid; Federal Regulation; Government School Relationship; Higher Education; Industry; Professional Continuing Education; Public Officials; Recycling; *School Community Programs; *Waste Disposal

ABSTRACT

The nation's overall efforts in solid waste management are noted, and suggestions and examples are presented concerning activities that can be undertaken by institutions of higher education to assist their communities to achieve safer and cleaner environments. The federal regulatory agency, The Environmental Protection Agency (EPA), is concerned with air and water pollution, solid wastes, and noise, and provides technical assistance to local and state governments. Colleges and universities have devised the following campus activities: campus cleanup, recycling, and energy saving efforts. Additionally, many colleges and universities work directly with communities in solid waste projects. Personnel in this field often need specific information and continuing education courses, seminars, and workshops that the higher education community can provide. Elected officials often require help to become more informed about solid wastes. Citizens groups and environmentally aware groups may need assistance in sponsoring conferences, researching legislation, and other activities. Information is provided on federally sponsored funding programs for which colleges are eligible. A bibliography of information sources and a map of EPA regional offices are included. (SK)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED185893

Academia's Garbage

Campus/Community Solid Waste Projects

"PERMISSION TO REPRODUCE THIS MATERIAL IN MICROFICHE ONLY HAS BEEN GRANTED BY
AASCU
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC) AND USERS OF THE ERIC SYSTEM."

U.S. DEPARTMENT OF HEALTH EDUCATION & WELFARE NATIONAL INSTITUTE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

BEST COPY AVAILABLE

by Marcia Boyles, Ph.D.

American Association of State Colleges and Universities
One Dupont Circle
Suite 700
Washington, D. C. 20036

for the

Office of Federal Activities
U. S. Environmental Protection Agency
Washington, D. C.

Under grant no. T900566-01-3

June 1978

HE-012 517

2

EPA Review Notice

This report has been reviewed by the Environmental Protection Agency and approved for publication. Approval does not signify that the contents necessarily reflect the views and policies of the Environmental Protection Agency, nor does mention of trade names or commercial products constitute endorsement or recommendation for use.

Preface

Under Grant Number T 900566-01-3 from the U. S. Environmental Protection Agency, the American Association of State Colleges and Universities recently investigated the possible roles of colleges and universities in the nation's efforts toward reducing pollution and toward improving environmental quality. The AASCU investigation, initially conducted by Dr. Albert Watrel, President, Dickinson State College, North Dakota, culminated in a final report which contained several of the suggestions for campus and community activities that are included in this publication.

Appreciation for their helpfulness is expressed to Ms. Karen Moorhouse and Mr. Don Cook, Office of Federal Activities, U. S. EPA, and to those several institutions visited and others with whom considerable correspondence and telephone discussions were conducted.

MINIMUM 5 CENT REFUND IN OREGON
OREGON REFUNDABLE CAN

5

Introduction

Since the 1960's, college and university communities – students, faculty, and administrators – have become more and more aware of environmental issues. This awareness was shown dramatically on April 22, 1970 when some 20 million Americans participated in a variety of activities focusing on environmental concerns. That was the first Earth Day, organized and implemented mostly by college and university students, but involving men and women of all ages.

In the 1970's, public awareness and concern about environmental problems have been translated into specific legislation – on federal, state, and local levels. In many colleges and universities formal educational programs in environmental sciences were started or expanded. In addition, a variety of innovative environmental activities were – and are – being undertaken on campuses. These activities have several purposes:

- to educate students in environmental problems;
- to serve communities, regions, and states by fostering public understanding of environmental issues;
- to make the college or university more environmentally responsible.

The focus of this publication, then, is to highlight briefly the nation's overall efforts in solid waste management, and to present suggestions for and examples of activities which can be undertaken by institutions of higher education to assist their communities to achieve safer and cleaner environments.

EPA-DOCUMERICA Falconer

7

What are the problems of solid waste?

■ As the U.S. population increases and as technological advances occur, amounts of solid wastes also increase—garbage, refuse, sludge from waste or water treatment plants, and other discarded material from industrial, commercial, mining, and agricultural operations, as well as from community activities. Americans now create five times more solid waste than citizens of any other developed country.

■ Many components of municipal solid wastes—such as product and packaging elements—have more than doubled since the early 1950's. Already costing nearly $4 billion annually, municipal solid waste treatment is expected to cost even more, due to higher land costs, antipollution requirements, and general inflation.

■ Many traditional methods of disposing of solid wastes—dumping into lakes, streams, or oceans; incinerators and trash fires; open dumps—are not only aesthetically unacceptable to most communities, but they also may create serious pollution and public health dangers.

■ Surveys show that disposing of solid wastes is the major problem cited by many mayors, city council members, and other local government officials. In addition to rising costs, local officials must cope with zoning laws, finding new disposal sites, and the closing of deposit sites and facilities made obsolete by new environmental laws.

Until recently, few federal laws required state and local solid waste management efforts. New standards set by the Clean Air Act of 1970, the Federal Water Pollution Act of 1972, and the Resource Conservation and Recovery Act of 1976 must now be met by communities, counties, and states through the efforts of state and local governments.

■ The earth's resources are finite. Aluminum, copper, iron and other metals; glass; wood and wood products such as paper and cardboard; petroleum products; and certain other materials must be reused to a far greater extent.

■ It is estimated that 25 percent of municipal solid wastes could be recovered through:

"recycling" of such items as drink cans to remove the steel and aluminum;

"material conversion" of wastes into different forms, for example, converting auto tires into road-paving material;

"energy recovery" to capture the heat value from organic wastes.

EPA-DOCUMERICA Daniel

Who is doing what . . . and why?

Efforts toward solving environmental problems are being made at all levels of government: federal, state, and local. The overseer of all of these efforts, the U. S. Environmental Protection Agency (EPA), was created by Congress in 1970. The EPA is charged with mounting a coordinated attack on air and water pollution, solid wastes, hazardous wastes, and noise. In addition to the Agency's central headquarters in Washington, D. C., EPA regional offices are located in ten major cities. (See Appendix for addresses).

As well as being a regulatory agency that writes and watch-dogs legislated regulations and guidelines, the EPA also provides technical assistance to local and state governments and others who request it. For example, the EPA's Solid Waste Information Retrieval System (SWIRS) offers by mail—at no cost to users—access to over 37,000 documents on solid waste management. (See the Bibliography/Information Sources Section for address).

In its role as a regulatory agency, the EPA oversees implementation of a number of pieces of important legislation. In the area of solid waste management, EPA efforts are directed through its Office of Solid Waste under provisions of the Resource Conservation and Recovery Act of 1976 (P.L. 94-580). This Act charges the EPA Office of Solid Waste with establishing a partnership of federal/state/local governments in order to implement:

- land protection through regulation and control of wastes and waste-disposal operations;
- regulation and control of hazardous wastes through computerized tracking of the wastes;
- improvements in all aspects of waste management at state, regional, and local levels;
- reduction in amounts of solid wastes;
- increased resource recovery of solid wastes;
- broad public education programs with rapid dissemination of solid waste management information;
- broad public participation in the development and improvement of solid waste management on all levels.

States, too, legislate solid waste efforts. Solid waste agencies exist in all states to coordinate with federal and local efforts, and to implement and oversee state-level activities. (See Appendix B for state agency addresses).

Local activities take place on town, city, and county levels. In Virginia, for example, solid waste activities in the City of Alexandria are assigned to the Department of Transportation and Environmental Services of the City government; in Fairfax County, to the Office of Waste Management in the Department of Public Works.

EPA DOCUMERICA Library

Solid waste activities of colleges and universities

In their efforts to meet community and regional needs, colleges and universities have devised various activities in the area of solid wastes. Some of these activities involve little or no funding and result from the dedicated and often extra-curricular activities of a single faculty member and/or group of students. Other efforts receive modest support, while still others require strong organizational and financial commitment on the part of the college or university.

Solid waste activities of varying types may occur on rural, urban, and suburban campuses, and in small, large, and medium-sized institutions of higher education.

Who . . . and where within the college?

While usually sponsored by faculty and students in environmental science programs, collegiate solid waste activities also originate from or involve personnel in public administration, health sciences, biology, chemistry, engineering, computer sciences, and other disciplines. Solid waste management requires interdisciplinary or multidisciplinary approaches to solve the many problems which it presents, for example:

public health—in water or air pollution, or in the dumping of radiation wastes;

safety—in determining the combustibility of mixed wastes at a dumping site;

biology and chemistry—in determining the nature of water pollutants and their effect upon aquatic organisms;

computer sciences—in determining the most effective municipal home waste pickup routes and schedules.

A coordinated approach to solid waste activities on a campus and in a campus-community relationship appears most effective in a multidisciplinary unit, or, at the least, in a unit that has easy access to the services of many disciplines.

To facilitate multidisciplinary approaches, many institutions have started community service-oriented units separate from regular academic departments. For example, at Texas Tech University and the University of Maine at Farmington, environmental community-oriented activities occur in a Center/Division of Public Service; at Virginia Commonwealth University in the School of Community Services; and at the University of Akron in the Center for Urban Studies.

EPA DOCUMERICA Dan M. Cox

Activities on campuses

Environmental projects in colleges and universities often begin on – and for the direct benefit of – the campus itself. Examples of some of these campus activities are:

Campus cleanups

Usually held in the Spring in picturesque campus sites – woods, streams, ravines – campus cleanups may be all-college affairs with faculty, administrators, and students pitching in, or wholly student efforts. Campus cleanups can become modest money-making events if the collected trash is separated and sold for recycling.

Recycling

Paper, cardboard, bottles, oil, and other campus-produced solid wastes are being recycled or reused in many institutions of higher education. Some examples:

Office paper: high grade office wastepaper – which has a considerable (approximately $55/ton) recycling value – is collected efficiently in the EPA and some other federal agencies by placing small collection containers on employee desks. Some colleges and universities are now using this system.

Oil: used crankcase oil from an institution's motorpool vehicles can be collected and usually sold locally.

Bottles: a number of colleges and universities, for example, the State University of New York at Binghamton, have experimented with deposits on campus-sold beverage containers. At Cornell University, mandatory 5¢ deposits were set for campus-sold soft drinks; refunds are available at several points on the campus. This has become a permanent program at the University despite some problems (i.e., bottle storage and the need to spray the storage against insects).

Recycling centers: recycling of campus solid wastes – glass, food and drink cans, paper and cardboard – occurs in small and medium-sized campuses usually through nearby municipal or county recycling centers. (Depending on local prices for recyclable materials, a population of some 30,000 may be required to make a recycling center cost-effective).

On some large campuses, for example, the University of Maryland, a recycling center has been established for the college community, complete with separation supervision, compacters, and two 2-ton storage bins. The University provides a small parcel of land with a shed and the storage bins. Student volunteers oversee separation containers in dorms and office buildings, and pick-up, separate, and store the glass, cans and paper. Work-study students in University-owned trucks transport filled storage bins once every month or so to nearby purchasers of the materials. The

University of Maryland's center is cost-effective, and actually produces a small profit. Reasons for its success appear to be: extensive use of the center by members of the community-at-large as well as the college community; close supervision of the center's premises when it is open; a high level of organization by student volunteers; and the offer of small cash incentives to the dorms and office buildings that participate in the program.

Energy savings

Encouraged by increased fuel and utility costs, various energy-saving efforts are occurring in colleges and universities, including:

- requesting students, faculty, and janitorial staff to turn off lights and turn down thermostats.
- major overhauls and design changes in the heating and air-conditioning systems of the institution. Energy and resource-saving power systems that burn refuse and are cooled by treated wastewater have been designed for the University of Florida and Central Michigan University. While there is the disadvantage of requiring a large capital outlay to convert to this system from a conventional one, a 10-year payback schedule was projected for such an installation at Central Michigan. At the University of Oregon, the campus power system uses converted trash obtained from the county, plus wood waste by-products of local lumber industries.
- a switch to smaller vehicles in the college or university motor pool. (A savings of 15-17 gallons gas/year/100 pounds, is estimated per car).

Other ideas

- Convert a campus sanitary landfill into a ski hill.
- Hold a campus ecology- or sun-day, with films, speakers, and instructional/recreational outdoor activities.
- Invite interested students and faculty to inspect and make suggestions on how to improve:
  campus waste treatment;
  heating, cooling, and lighting of the campus plant.

15

Campus/community solid waste activities

In addition to activities on campuses, many colleges and universities work directly with communities in solid waste projects. *Every community has its own unique problems in dealing with its wastes* – whether the wastes are discharges from New England lumber mills, massive alewife (fish) dieoffs and pileups on Lake Michigan beaches, waste treatment sludge in Washington, D.C., kepone in the James River, or auto emissions in Los Angeles and Chicago.

Crucial to college or university solid waste efforts for their communities, then, is to know the information and research needs of local individuals and groups:

- Solid waste management personnel
- City and county officials
- Citizens groups
- Teachers and other educators
- Industries that produce solid wastes

Institutions of higher education have devised various ways to find out the needs of local individuals and groups, through:

- Open or invitational forums held to express problems and needs
- *Ad hoc* or permanent college committees comprised of representatives of community groups
- Personal contacts by college faculty or administrators
- Reports of student interns placed in local government offices, in local industries, or in solid waste facilities.

The following are examples of activities that have resulted from colleges and universities knowing – and meeting – the needs of community groups:

Solid waste management personnel

Like professionals in other fields, solid waste management personnel often need continuing education courses, seminars, and workshops. At Louisiana Tech University, for example, water and wastewater training courses are offered to upgrade the skills of professionals in the field. Texas Tech University plans to give administrative skills courses to environmental field managers.

Solid waste management personnel also may need specific information and research in order to do their own jobs better. For example, at Florida University, a mathematics professor determined, by computer analysis, the most efficient truck routes for home and industrial waste pickups for a nearby municipality. Other requests for assistance from solid waste management personnel have resulted in colleges monitoring the growth rate of trees raised on land deposited with waste treatment sludge, and monitoring the biological effects of thermal pollution by a local nuclear power plant. Requests from solid waste management personnel often result in viable student research or classroom projects.

EPA DOCUMERICA Gene Daniels

City and county officials

Due to the increased complexity of the subject – legislative as well as technological – and to increased public awareness, elected officials often require help to become informed about solid waste management. One Councilman has been quoted as saying: "Solid waste is becoming an issue that involves more people than just the professionals in the field. As elected officials, we are constantly asked questions about it. I have to know something about solid waste not from an intellectual sense, but just from a sheer survival sense."

Some ways in which colleges and universities can assist public officials are:

- Hosting seminars and workshops on solid waste topics for public officials. (Assistance in locating speakers can often be obtained from EPA regional offices).
- Writing and circulating newsletters on outstanding solid waste activities at local, state, and federal levels.
- Providing student research on the environmental impact of specific legislation. (For example, the local environmental and economic impact of bottle deposit-return bills has been researched in several universities).
- Providing student/faculty research on a variety of basic issues in solid waste management, such as:
  - How much and what types of solid waste are generated in the municipality or county?
  - What methods of solid waste disposal are used locally?
  - What is the feasibility of starting a city, county or regional resource recovery center in the area?
- In a 1975 study, for example, the Florida Atlantic University/Florida International University Joint Center for Environmental and Urban Problems researched and published "Solid Waste Disposal and Resource Recovery, An Assessment of Conditions in Twenty-One Florida Counties." The study was conducted with a $10,000 state grant.

Local officials also may require faculty/student research on specific waste management problems or systems. In Washington, for example, the City of Seattle was interested in resource recovery. Instead of hiring an outside consultant who might be biased toward a particular technology or system, the City approached the engineering faculty at the University of Washington. The report prepared by that faculty urged the City to explore the possibility of extracting methane or ammonia from waste. In Illinois, design of a water recycling system for the village of Park Forest South by faculty of the College of Environmental and Applied Sciences of Governors State University resulted in a $10 million federal grant to the village.

Citizens groups

Environmentally aware groups such as the League of Women Voters and Common Cause may need assistance in sponsoring conferences, researching legislation, and other activities that can be provided by faculty and students.

Other citizens groups—churches, schools, Chambers of Commerce—may need

- Speakers on solid waste and other environmental topics. Maintenance of a list of local environmental experts—faculty as well as non-campus personnel—can be done on either a formal or an informal basis as long as its existence is known by interested groups.
- Written and audiovisual materials on solid waste. Much information is available from EPA and other sources; thus, keeping up-to-date lists and catalogs of available materials is usually sufficient.
- Open forums and public awareness presentations. Some institutions of higher education present broad views of environmental issues. For example, Virginia Commonwealth University conducted a series of workshops designed to acquaint the public with the limitations of the future. Other institutions offer forums on more local issues. Western New Mexico University, for instance, hosted citizen forums that included such titles as "Are mining corporations and the ecological environment compatible in Grant County, New Mexico?"

EPA-DOCUMERICA/Entheos

Teachers and other educators

In addition to requiring specific information on environmental topics (which can be provided through short-term workshops and written or audiovisual materials), *some primary and secondary school teachers and college instructers require environmentally-oriented continuing education/graduate-level courses designed to directly assist them in their jobs.* Thus, a number of institutions, as for example, the University of Tennessee at Chattanooga and Grand Valley State Colleges, have offered summer training institutes for secondary school teachers that concentrate on environmental issues.

Teaching materials that emphasize environmental concepts and information designed for primary and secondary school students have been in short supply. Several California State Universities have received federal grants to produce such materials. Appalachian State University provides both teaching materials and environmental activities for school children and teachers. The activities—student and faculty conducted nature hikes and informal field programs—take place on a 90-acre plot of unspoiled land owned by the University and converted into an Environmental Learning Center.

Industries

Small local industries that produce solid wastes may not be aware of the recycling possibilities for those wastes. Workshops—possibly in conjunction with EPA regional personnel—designed to acquaint small industry managers with these recycling potentials, can be offered by colleges and universities. A major effort—the formation of the Iowa Industrial Waste Information Exchange—was undertaken recently by the University of Iowa in response to a nationwide trend to form clearinghouses for industrial waste exchanges ("waste-swapping").

Funding programs of support

There are several generally modest federal programs of support for which environmental activities of colleges and universities are eligible. Among these programs are the following:

University Community Service-Grants to States: funded by the Office of Education, DHEW, to state agencies on a formula basis. Sub-grants to institutions of higher education are made by state agencies through procedures established by the respective states. (These grants tend to be small, and the project objectives must meet the priorities established by each state). The overall objectives of the grants are *to encourage colleges and universities to aid in the solution of community programs by strengthening community service programs and to expand continuing education opportunities.*

Information source:
Dr. J. Eugene Welden, Acting Chief
Bureau of Postsecondary Education, Office of Education
400 Maryland Ave. S.W.
Washington, D.C. 20202 (202/245-9868)

University Community Service-Special Projects: to assist institutions of higher education to carry out special programs and projects which are *designed to seek solutions to national and regional problems relating to technological and social changes and environmental pollution.*

Information source:
Dr. J. Eugene Welden, Acting Chief
Bureau of Postsecondary Education, Office of Education
400 Maryland Ave. S.W.
Washington, D.C. 20202 (202/245-9868)

Faculty Training Institutes, Short Courses and Workshops on Energy and Environmental Subjects (Summer Institutes): to assist institutions of higher education *to train or upgrade the training of college science and engineering faculty and high school science and social science teachers in energy resource alternatives, conservation, environmental effects, and social/political aspects of energy development.*

Information source:
Office of University Programs, ERDA
Washington, D.C. 20545 (202/376-9211)

Environmental Education Grants: *to educate citizens on the problems of environmental quality and ecological balance.* Research, development, and pilot or demonstration projects which support the development of educational processes dealing with the relation of population, pollution, resource allocation and depletion, conservation, transportation, technology, economic impact, and urban and rural planning to the total human environment.

Information source:
Dr. Walter Bogan
Office of Environmental Education
Bureau of Elementary and Secondary Education
Office of Education
Washington, D.C. 20202 (202/245-9231)

Bibliography/ information sources

"Academic Public Service Program Descriptions Shared by Member Institutions of the American Association of State Colleges and Universities." Resource Center for Planned Change, AASCU, 1977.

"Problem-Solving in Solid Waste Management Through Federal-Local Cooperation, 8 Case Studies." Publication N. SW-134, U. S. Environmental Protection Agency, 1974.

"Recycling." Reprinted from: "Government and the Nation's Resources: Report of the National Commission on Supplies and Shortages." Publication No. SW-601, U. S. Environmental Protection Agency, 1977.

"Resource Recovery and Waste Reduction. Fourth Report to Congress." Publication No. SW-600, U. S. Environmental Protection Agency, 1977.

"Solid Waste Management. Available Information Materials. Interim Catalog." Publication No. SW-58.27, U. S. Environmental Protection Agency, 1977.

"Solid Waste Management Today . . . Bringing About Municipal Change." *Nation's Cities*, August, 1975. (Reprints available from the National League of Cities, 1620 Eye Street, N.W., Washington, D.C. 20006).

Solid Waste Information Retrieval System (SWIRS). Provides access to over 37,000 documents. For information on how to use this system write: SWIRS, P.O. Box 2365, Rockville, Maryland 20852.

WRAP. A Model for Regional Solid Waste Management Planning. User's Guide." Publication No. SW-574, U. S. Environmental Protection Agency, 1977.

Appendix A

U.S. Environmental Protection Agency/Regional Offices

Region 1
John F. Kennedy Bldg.
Boston, MA 02203
(617) 223-7210

Region 2
26 Federal Plaza
New York, NY 10007
(212) 264-2515

Region 3
6th & Walnut Sts.
Philadelphia, PA 19106
(215) 597-9814

Region 4
345 Courtland St., N.E.
Atlanta, GA 30308
(404) 881-4727

Region 5
230 South Dearborn St.
Chicago, IL 60604
(312) 353-2000

Region 6
1201 Elm St., First International Bldg.
Dallas, TX 75270
(214) 749-1962

Region 7
1735 Baltimore Ave.
Kansas City, MO 64108
(816) 374-5493

Region 8
1860 Lincoln St.
Denver, CO 80203
(303) 837-3895

Region 9
100 California St.
San Francisco, CA 94111
(415) 556-2320

Region 10
1200 6th Ave.
Seattle, WA 98101
(206) 442-5810

Appendix B
State solid waste agencies

Alabama
Division of Solid Waste and Vector Control
Department of Health
State Office Building
Montgomery, Alabama 36104
FTS Operator 534-7700
OFF (205) 832-6728

Alaska
Solid Waste Program
Department of Environmental Conservation
Pouch O
Juneau, Alaska 99801
Seattle FTS Operator 399-0150
OFF (907) 465-2635

American Samoa
Department of Public Works
Government of American Samoa
Pago Pago, American Samoa
Overseas Operator (Comm. Call)
Don Graf, Chairman
Environmental Quality Commission
Office of Governor, American Samoa
Pago Pago, American Samoa 96921
Overseas Operator (Comm. Call)

Arizona
Bureau of Sanitation
Arizona Department of Health
1740 W. Adams Street
Phoenix, Arizona 85007
FTS Operator 261-3900
OFF (602) 271-4641
Direct Dial FTS 765-4641

Arkansas
Division of Solid Waste
Arkansas Department of Pollution Control and Ecology
P.O. Box 9583
Little Rock, Arkansas 72209
FTS Operator 740-5011
OFF (569) 371-1701

California
State Solid Waste Management Board
1709 11th Street
Sacramento, California 95814
FTS Operator 522-3330
OFF (916) 322-3330
Direct Dial 8-552-3330

Vector and Waste Management Section
California Department of Health
714 P Street
Sacramento, California 95814
FTS Operator 448-2000
OFF (916) 322-2337
Direct Dial 8-552-2337

Colorado
Department of Health
4210 East Eleventh Avenue
Denver, Colorado 80220
FTS Operator 327-0111
OFF (303) 388-6111, Ext. 322

Connecticut
Solid Waste Management Programs
Department of Environmental Protection
122 Washington Street
Hartford, Connecticut 06106
FTS Operator 244-2000
OFF (203) 566-3672

Delaware
Solid Waste Section
Department of National Resources and Environmental Control
Edward Tatnall Building
Dover, Delaware 19901
FTS Operator 487-6011
OFF (302) 678-4781

District of Columbia
Office of Environmental Planning
Department of Environmental Services
415 12th Street, N.W.
Washington, D.C. 20004
FTS Operator (900) 629-4581
OFF (202) 629-4581

Florida
Florida Department of Environmental Regulation
2562 Executive Center Circle E.
Tallahassee, Florida 32301
FTS Operator 946-2111
OFF (904) 488-1345

Georgia
Moses N. McCall, III, Director
Solid Waste Management Service
Department of Natural Resources
270 Washington Street, S.W.
Atlanta, Georgia 30334
FTS Operator 285-0111
OFF (404) 656-2833

Guam
EPA, Government of Guam
P.O. Box 2999
Agana, Guam 96910
Overseas Operator (commercial call) 749-2486

Hawaii
State Department of Health
P.O. Box 3378
Honolulu, Hawaii 96801
Calif. FTS Operator 556-0220
OFF (808) 548-2811, Ext. 521

Environmental Health Division
Hawaii Department of Health
P.O. Box 3378
Honolulu, Hawaii 96801
Calif. FTS Operator 556-0220

Idaho
Solid Waste Section
Department of Environmental and Community Services
State House
Boise, Idaho 83720
FTS Operator 554-2287
OFF (208) 384-2287

Illinois
Division of Land Pollution Control
Environmental Protection Agency
2200 Churchill Drive
Springfield, Illinois 62706
FTS Operator 955-4200
OFF (217) 782-6760

Indiana
Solid Waste Section
State Board of Health
1330 West Michigan Street
Indianapolis, Indiana 46207
FTS Operator 331-7000
OFF (317) 633-4393

Iowa
Land Quality Management Division
Department of Environmental Quality
3920 Delaware Avenue
P.O. Box 3326
Des Moines, Iowa 50316
FTS Operator 862-4000
OFF (515) 247-4203

Kansas
Solid Waste Management Section
Department of Health and Environment
Topeka, Kansas 66620
FTS Operator 757-3821
OFF (913) 296-3821

Kentucky
Division of Solid Waste
Department of Natural Resources and Environmental Protection
275 East Main Street
Frankfort, Kentucky 40601
FTS Operator 352-5011
OFF (502) 546-6716

Louisiana
Solid Waste & Vector Control Division
Health & Human Resources Administration
P.O. Box 60630
New Orleans, Louisiana 70160
FTS Operator 682-2611
OFF (504) 527-5112

Governor's Council on Environmental Quality
P.O. Box 44066
Baton Rouge, Louisiana 70804
OFF (504) 389-6981

Maine
Division of Solid Waste Management
Department of Environmental Protection
State House
Augusta, Maine 04330
FTS Operator 833-6171
OFF (207) 289-2111

Maryland
Division of Solid Waste
Maryland State Department of Health & Mental Hygiene
201 West Preston Street
Baltimore, Maryland 21201
FTS Operator 932-2770/1/2
OFF (301) 383-2770/1/2

Massachusetts
Bureau of Solid Waste Disposal
Department of Environmental Management
Room 1905
Leverett Saltonstall Building
100 Cambridge Street
Boston, Massachusetts 02114
FTS Operator 223-2100
OFF (617) 727-4283

Solid Waste Regulatory
Bureau of Community Sanitation
Department of Public Health
600 Washington Street
Boston, Massachusetts 02111
FTS Operator 223-2100
OFF (617) 727-2686

Hazardous Waste Regulatory
Oil and Hazardous Waste Branch
Department of Natural Resources
State Office Building – Room 1901
100 Cambridge Street
Boston, Massachusetts 02202
FTS Operator 223-2100
OFF (617) 727-2655

Michigan
Solid Waste Management Division
Department of Natural Resources
905C Southland Street
Lansing, Michigan 48926
FTS Operator 474-1910
OFF (517) 373-6620

Minnesota
Division of Solid Waste
Pollution Control Agency
1935 West Country Road, B-2
Roseville, Minnesota 55113
FTS Operator 725-4242
OFF (612) 296-7315/6

Mississippi
Division of Solid Waste Management and Vector Control
Board of Health
P.O. Box 1700
Jackson, Mississippi 39205
FTS Operator 490-4211
OFF (601) 354-6616

Missouri
Solid Waste Management Program
Department of Natural Resources
State Office Building
P.O. Box 1368
Jefferson City, Missouri 65101
FTS Operator 758-7212
OFF (314) 751-3241

Montana
Solid Waste Management Bureau
Department of Health and Environmental Sciences
1424 9th Avenue
Helena, Montana 59601
FTS Operator 587-2821
OFF (406) 587-2821

Nebraska
Solid Waste Division
Department of Environmental Control
State House Station, Box 94653
Lincoln, Nebraska 68509
FTS Operator 867-2186
OFF (402) 471-2186

Nevada
Environmental Protection Services
Department of Human Resources
Capitol Complex
Carson City, Nevada 89710
FTS Operator 598-5911
OFF (702) 885-4670

New Hampshire
Bureau of Solid Waste
Department of Health & Welfare
State Laboratory Building – Hazen Drive
Concord, New Hampshire 03301
FTS Operator 834-7014
OFF (603) 271-2747

New Jersey
Solid Waste Administration
Division of Environmental Protection
P.O. Box 1390
Trenton, New Jersey 08625
FTS Operator 340-3511
OFF (609) 292-2697

New Mexico
Solid Waste Division
New Mexico Environmental Improvement Agency
Crown Building
Santa Fe, New Mexico 87503
OFF (505) 476-5271

General Sanitation Division
Environmental Improvement Agency
P.O. Box 2348
Crown Building
Santa Fe, New Mexico 87503
OFF (505) 476-5271

New York
Division of Solid Waste Management
Department of Environmental Conservation
50 Wolf Road
Albany, New York 12201
FTS Operator 562-4411
OFF (518) 457-6603

North Carolina
Solid Waste and Vector Control Branch
Department of Human Resources
P.O. Box 2091
Raleigh, North Carolina 27602
FTS Operator 672-1020
OFF (919) 829-2178

North Dakota
Division of Waste Supply and Pollution Control
State Department of Health
1200 Missouri Avenue
Bismark, North Dakota 58505
FTS Operator 783-4011
OFF (701) 224-2375

Ohio
Office of Land Pollution Control
Ohio Environmental Protection Agency
P.O. Box 1049
Columbus, Ohio 43216
FTS Operator 943-6600
OFF (614) 466-8934

Oklahoma
Solid Waste Branch
State Department of Health
10th & Stonewall Streets
Oklahoma City, Oklahoma 73105
OFF (405) 271-5338

Oregon
Solid Waste Management Division
Department of Environmental Quality
1234 S.W. Morrison Street
Portland, Oregon 97205
FTS Operator 423-4111
OFF (503) 229-5913

Pennsylvania
Division of Solid Waste Management
Department of Environmental Resources
8th Floor, Fulton Building
P.O. Box 2063
Harrisburg, Pennsylvania 17120
FTS Operator 637-7381
OFF (717) 787-7381

Puerto Rico
Environmental Quality Board
Office of the Governor
Box 11488
Santurce, Puerto Rico 00910
DC FTS Operator (202) 967-1221
OFF (809) 725-5140, Ext. 263/4

Rhode Island
Division of Solid Waste Management
Department of Health
204 Health Building
Davis Street
Providence, Rhode Island 02908
FTS Operator 838-1000
OFF (401) 277-2808/9

24

Solid Waste Management & Planning
Rhode Island Solid Waste
Management Corporation
39 Pike Street
Providence, Rhode Island 02903
FTS Operator 838-1000
OFF (401) 831-4440

South Carolina
Solid Waste Management Division
Department of Health and
Environmental Control
J. Marion Sims Building
2600 Bull Street
Columbia, South Carolina 29201
FTS Operator 677-5011
OFF (803) 758-5681

South Dakota
Air Quality and Solid Waste Program
Department of Environmental
Protection
Office Building No. 2
Pierre, South Dakota 75701
FTS Operator 783-7000
OFF (605) 224-3784

Tennessee
Division of Sanitation and Solid
Waste Management
Department of Public Health
Capitol Hill Building, Suite 320
Nashville, Tennessee 37219
FTS Operator 852-5022
OFF (615) 741-3424

Texas
Solid Waste Division
State Department of Health
Resources
1100 West 49th Street
Austin, Texas 78756
FTS Operator 458-7271
OFF (512) 475-7271

Solid Waste Branch
Texas Water Quality Board
P.O. Box 13246
Austin, Texas 78711
FTS Operator 458-7271
OFF (512) 475-6625

Trust Territories
Department of Health Services
Office of High Commissioner
Trust Territory of the Pacific Islands
Saipan Marianas 96950
Overseas Operator (Comm. Call)

Utah
General Sanitation Section
State Division of Health
44 Medical Drive
Salt Lake City, Utah 84113
FTS Operator 588-5500
OFF (801) 533-5145

Vermont
Air and Solid Waste Programs
Agency of Environmental
Conservation
P.O. Box 489
Montpelier, Vermont 05602
FTS Operator 832-6501
OFF (802) 828-3395

Virgin Islands
Division of Utilities and Sanitation
Department of Public Works
Government of the Virgin Islands
Charlotte Amalie
St. Thomas, Virgin Islands 00801
OFF (809) 744-2070 (Comm. Call)

Virginia
Bureau of Solid Waste and Vector
Control
Department of Health
Room 209, 401-A Colley Avenue
Norfolk, Virginia 23507
FTS Operator 939-6011
OFF (804) 627-4511

Washington
Solid Waste and Resource Recovery
Division
Department of Ecology
Olympia, Washington 98501
FTS Operator 390-6011
OFF (206) 753-6683

Division Supervisor
Solid Waste Management Division
Olympia, Washington 98501
FTS Operator 434-6883
OFF (206) 753-6883

West Virginia
Dale Parsons, Director
Solid Waste Program
State Department of Health
1800 Washington Street E.
Charleston, West Virginia 25305
FTS Operator 885-2987
OFF (304) 348-2987

Wisconsin
John J. Reinhardt, Chief
Solid Waste Management Section
Department of Natural Resources
Box 450
Madison, Wisconsin 53701
FTS Operator 364-5000
OFF (608) 266-3538

Wyoming
Charles Porter
Solid Waste Program Supervisor
Wyoming Department of
Environmental Quality
State Office Building West
Cheyenne, Wyoming 82002
FTS 328-9752
OFF (307) 328-9752

Back cover
EPA-DOCUMERICA/Entheos

Paper stock
100% recycled "Speckletone"
French Paper Company

Designer
Larry Smith

25